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Sequence Listing was accepted.

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217-9197 (toll free).

Reviewer: Saleem, Syed (ASRC)

Timestamp: [year=2010; month=11; day=5; hr=8; min=16; sec=39; ms=487; ]

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Application No: 10687799

Version No: 3.1

Input Set:

Output Set:

Started: 2010-11-05 08:14:11.819

Finished: 2010-11-05 08:14:15.502

Elapsed: 0 hr(s) 0 min(s) 3 sec(s) 683 ms

Total Warnings: 61

Total Errors: 0

No. of SeqIDs Defined: 95

Actual SeqID Count: 95

Error code	Error Description
W 213	Artificial or Unknown found in <213> in SEQ ID (31)
W 213	Artificial or Unknown found in <213> in SEQ ID (32)
W 213	Artificial or Unknown found in <213> in SEQ ID (33)
W 213	Artificial or Unknown found in <213> in SEQ ID (34)
W 213	Artificial or Unknown found in <213> in SEQ ID (35)
W 213	Artificial or Unknown found in <213> in SEQ ID (36)
W 213	Artificial or Unknown found in <213> in SEQ ID (37)
W 213	Artificial or Unknown found in <213> in SEQ ID (38)
W 213	Artificial or Unknown found in <213> in SEQ ID (39)
W 213	Artificial or Unknown found in <213> in SEQ ID (40)
W 213	Artificial or Unknown found in <213> in SEQ ID (41)
W 213	Artificial or Unknown found in <213> in SEQ ID (42)
W 213	Artificial or Unknown found in <213> in SEQ ID (43)
W 213	Artificial or Unknown found in <213> in SEQ ID (44)
W 213	Artificial or Unknown found in <213> in SEQ ID (45)
W 213	Artificial or Unknown found in <213> in SEQ ID (46)
W 213	Artificial or Unknown found in <213> in SEQ ID (47)
W 213	Artificial or Unknown found in <213> in SEQ ID (48)
W 213	Artificial or Unknown found in <213> in SEQ ID (49)
W 213	Artificial or Unknown found in <213> in SEQ ID (50)

**Input Set:**

**Output Set:**

**Started:** 2010-11-05 08:14:11.819  
**Finished:** 2010-11-05 08:14:15.502  
**Elapsed:** 0 hr(s) 0 min(s) 3 sec(s) 683 ms  
**Total Warnings:** 61  
**Total Errors:** 0  
**No. of SeqIDs Defined:** 95  
**Actual SeqID Count:** 95

Error code

Error Description

This error has occurred more than 20 times, will not be displayed

# SEQUENCE LISTING

<110> Teeling, Jessica  
 Ruuls, Sigrid  
 Glennie, Martin  
 van de Winkel, Jan G.J.  
 Parren, Paul  
 Petersen, Jorgen  
 Baadsgaard, D.M.Sc., Ole  
 Huang, Haichun

<120> HUMAN MONOCLONAL ANTIBODIES AGAINST CD20

<130> 4086.1000-002

<140> 10687799

<141> 2003-10-17

<150> 60/419,163

<151> 2002-10-17

<150> 60/460,028

<151> 2003-04-02

<160> 95

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<212> DNA

<213> Homo sapiens

<400> 1

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tgtgcagcct ctggattcac ctttaatgat tatgccatgc actgggtccg gcaagctcca 180
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gactctgtga agggccgatt caccatctcc agagacaacg ccaagaagtc cctgtatctg 300
caaatgaaca gtctgagagc tgaggacacg gccttgattt actgtgcaaa agatatacag 360
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<210> 2

<211> 122

<212> PRT

<213> Homo sapiens

<400> 2

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Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Asn Asp Tyr
    20          25          30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
    35          40          45
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Lys	Gly	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Lys	Ser	Leu	Tyr
65					70					75					80
Leu	Gln	Met	Asn	Ser	Leu	Arg	Ala	Glu	Asp	Thr	Ala	Leu	Tyr	Tyr	Cys
			85					90					95		
Ala	Lys	Asp	Ile	Gln	Tyr	Gly	Asn	Tyr	Tyr	Tyr	Gly	Met	Asp	Val	Trp
		100					105						110		
Gly	Gln	Gly	Thr	Thr	Val	Thr	Val	Ser	Ser						
		115					120								

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 <212> DNA  
 <213> Homo sapiens

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 ctctcctgca gggccagtc gagtgtagc agctacttag cctggtacca acagaaacct 180  
 ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catccagcc 240  
 aggttcagtg gcagtgggtc tgggacagac ttcactctca ccatcagcag cctagagcct 300  
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 <212> PRT  
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Glu	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Thr	Leu	Ser	Leu	Ser	Pro	Gly
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Glu	Arg	Ala	Thr	Leu	Ser	Cys	Arg	Ala	Ser	Gln	Ser	Val	Ser	Ser	Tyr
			20					25					30		
Leu	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Gln	Ala	Pro	Arg	Leu	Leu	Ile
		35				40						45			
Tyr	Asp	Ala	Ser	Asn	Arg	Ala	Thr	Gly	Ile	Pro	Ala	Arg	Phe	Ser	Gly
	50				55					60					
Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile	Ser	Ser	Leu	Glu	Pro
65				70						75				80	
Glu	Asp	Phe	Ala	Val	Tyr	Tyr	Cys	Gln	Gln	Arg	Ser	Asn	Trp	Pro	Ile
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		100					105								

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 <213> Homo sapiens

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 tgtgcagcct ctggattcac ctttcatgat tatgccatgc actgggtccg gcaagctcca 180

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gggaagggcc tggagtgggt ctcaactatt agttggaata gtggtacat aggctatgcg 240
gactctgtga agggccgatt caccatctcc agagacaacg ccaagaactc cctgtatctg 300
caaatgaaca gtctgagagc tgaggacacg gccttgtatt actgtgcaaa agatatacag 360
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tcag 424

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<210> 6
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<212> PRT
<213> Homo sapiens

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 1          5          10          15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe His Asp Tyr
          20          25          30
Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val
          35          40          45
Ser Thr Ile Ser Trp Asn Ser Gly Thr Ile Gly Tyr Ala Asp Ser Val
          50          55          60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Ser Leu Tyr
65          70          75          80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Leu Tyr Tyr Cys
          85          90          95
Ala Lys Asp Ile Gln Tyr Gly Asn Tyr Tyr Tyr Gly Met Asp Val Trp
          100          105          110
Gly Gln Gly Thr Thr Val Thr Val Ser Ser
          115          120

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<210> 7
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<212> DNA
<213> Homo sapiens

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ctctcctgca gggccagtc gagtggttagc agctacttag cctggtacca acagaaacct 180
ggccaggctc ccaggctcct catctatgat gcatccaaca gggccactgg catcccagcc 240
aggttcagtg gcagtgggtc tgggacagac ttactctca ccatcagcag cctagagcct 300
gaagattttg cagtttatta ctgtcagcag cgtagcaact ggccgatcac cttcggccaa 360
gggacacgac tggagattaa ac 382

```

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<210> 8
<211> 107
<212> PRT
<213> Homo sapiens

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<400> 8
Glu Ile Val Leu Thr Gln Ser Pro Ala Thr Leu Ser Leu Ser Pro Gly
 1          5          10          15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Tyr
          20          25          30
Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile
          35          40          45
Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly

```

50	55	60
Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro		
65	70	75
Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Arg Ser Asn Trp Pro Ile		80
	85	90
Thr Phe Gly Gln Gly Thr Arg Leu Glu Ile Lys		95
	100	105

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 <211> 433  
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 tgtacaggct ctggattcac cttcagttac catgctatgc attgggttcg ccaggctcca 180  
 ggaaaaggct tggaatgggt atcaattatt gggactgggt gtgtcacata ctatgcagac 240  
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 atgaacagcc tgagagccga ggacatggct gtgtattact gtgcaagaga ttactatggt 360  
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 20 25 30  
 Ala Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val  
 35 40 45  
 Ser Ile Ile Gly Thr Gly Gly Val Thr Tyr Tyr Ala Asp Ser Val Lys  
 50 55 60  
 Gly Arg Phe Thr Ile Ser Arg Asp Asn Val Lys Asn Ser Leu Tyr Leu  
 65 70 75 80  
 Gln Met Asn Ser Leu Arg Ala Glu Asp Met Ala Val Tyr Tyr Cys Ala  
 85 90 95  
 Arg Asp Tyr Tyr Gly Ala Gly Ser Phe Tyr Asp Gly Leu Tyr Gly Met  
 100 105 110  
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 115 120 125

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 ctctcctgca gggccagtca gagtgttagc agctacttag cctggtacca acagaaacct 180

ggccaggctc ccaggctcct catctatgat gcattccaaca gggccactgg catcccagcc 240  
 aggttcagtg gcagtgggtc tgggacagac ttactctca ccatcagcag cctagagcct 300  
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 gggaccaagg tggagatcaa ac 382

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 20 25 30  
 Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu Ile  
 35 40 45  
 Tyr Asp Ala Ser Asn Arg Ala Thr Gly Ile Pro Ala Arg Phe Ser Gly  
 50 55 60  
 Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Ser Leu Glu Pro  
 65 70 75 80  
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 85 90 95  
 Thr Phe Gly Gly Gly Thr Lys Val Glu Ile Lys  
 100 105

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 Asp Tyr Ala Met His  
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<400> 14  
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 Gly

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 <211> 13  
 <212> PRT  
 <213> Homo sapiens

<400> 15  
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<210> 16  
<211> 11  
<212> PRT  
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<400> 16  
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1 5 10

<210> 17  
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<400> 17  
Asp Ala Ser Asn Arg Ala Thr  
1 5

<210> 18  
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<212> PRT  
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Gln Gln Arg Ser Asn Trp Pro Ile Thr  
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<400> 19  
Asp Tyr Ala Met His  
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Gly

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<210> 22

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<212> PRT

<213> Homo sapiens

<400> 22

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<210> 23

<211> 7

<212> PRT

<213> Homo sapiens

<400> 23

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1 5

<210> 24

<211> 9

<212> PRT

<213> Homo sapiens

<400> 24

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<212> PRT

<213> Homo sapiens

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Tyr His Ala Met His  
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<210> 26

<211> 16

<212> PRT

<213> Homo sapiens

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<400> 27  
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Arg Ala Ser Gln Ser Val Ser Ser Tyr Leu Ala  
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32

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<223> Primer

<400> 32

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<210> 33

<211> 20

<212> DNA

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<220>

<221> variation

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<223> n = T or G

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<210> 35

<211> 20

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<220>  
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27

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<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer

<400> 53

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20

<210> 54

<211> 116

<212> PRT

<213> Homo sapiens

<400> 54

Met Glu Leu Gly Leu Ser Trp Val Phe Leu Val Ala Ile Leu Glu Gly

1 5 10 15

Val Gln Cys Glu Val Gln Leu Val Gln Ser Gly Gly Gly Leu Val His

20 25 30

Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala